Hackathon AI in higher education – Preparatory module

Introduction

You will soon be taking part in the hackathon on AI in higher education. Although prior knowledge of Artificial Intelligence is not needed to participate in the hackathon, you should be familiar with some basic principles. We therefore offer the following preparation resources that will allow you to deepen your knowledge of the subject matter before taking part in the hackathon. It will take about three hours to complete the entire module (including both the 'optional' and 'mandatory route'). If you already have experience with AI, you will only need to study the parts that are necessary for the hackathon ('mandatory route'), which requires a time investment of about 40 minutes.

After following these sources:

- You will know what Artificial Intelligence is and will be able to pinpoint a number of examples of AI within the higher education context but also outside the education field.
- You will be familiar with the basic principles of probability, problem-solving and search strategies behind AI applications.
- You will be familiar with a number of AI platforms and will be able to describe their core characteristics.
- You will be able to explain what risks AI applications may pose in terms of algorithmic bias and privacy issues.
- You will be aware of the degree of control exercised by the tool and the user within an AI application.

Resources	Time estimate	Mandatory route	Optional route
Do you want to try AI? A helicopter view of AI in higher education, covering the definition, the value for higher education, the risks, the ethical considerations and numerous examples.	20 minutes	x	x
The national AI course Track 1 (A glimpse into the world of AI) and track 2 (What is AI?). These tracks show what AI is already used for and what we mean exactly by AI. Please note that you will need to log in to participate in this course.	40 minutes		x
Please note that the following components are derived from the Elements of AI course. We highly recommend the selected chapters, but we do advise you to complete the entire course. This will take about 5 to 10 hours of your time.			
Elements of AI | H1.1 | What do we mean by AI? This first part deals with the concept of artificial intelligence (AI) by focusing on the definition as well as some examples.	20 minutes		x

Elements of AI | H2.1 | Search & troubleshooting This section provides a very illustrative example of how to solve a search problem using AI.	20 minutes		x
Elements of AI |H2.3 | Search and games This section provides a very illustrative example of how AI can be used in games.	20 minutes		x
Elements of AI | H 3.2 | Bayes' theorem This section deals with how probability can be calculated.	20 minutes		x
Videos: Building an AI application. What is Artificial Intelligence? (in Dutch) Building AI Applications. What tools will you need? (in Dutch) Building an AI application. What steps will you take? (in Dutch)	10 minutes	x	x
Video: Control | Inge Molenaar This video covers the model of six levels of automation in higher education.	12 minutes	x	x
Elements of AI | H 6.1 | Societal impact of AI (in Dutch) This section covers algorithmic bias and privacy issues.	20 minutes	x	x
Video: AI in praktice | Interview with those in the know in higher education (in Dutch) In this interview, Jan Tjeerd Groenewoud and Roland Nijssen talk about how they use AI in their teaching practice and how they feel about their experience with it.	10 minutes	x	x
World-Wide-Web-AI-Safari Together on safari: take a look and test the possibilities!	30 minutes	x	x